

ABSTRACT

A lithographic apparatus is disclosed. The apparatus includes a radiation system that provides a beam of radiation, and a support structure that supports a patterning structure. The patterning structure is configured to pattern the beam of radiation according to a desired pattern. The apparatus also includes a substrate support that supports a substrate, and a projection system that projects the patterned beam onto a target portion of the substrate. The projection system includes an optical element that has a beam entry area and an optical element that has a beam exit area through each of which the patterned beam passes. The apparatus further includes a nucleated surface that is associated with the projection system on which a plurality of nucleation sites are provided. The surface is disposed away from at least one of the beam entry area and the beam exit area.